REMARKS/ARGUMENTS

In response to the Office Action dated August 10, 2004, claims 1-4 and 9-22 are canceled, and claims 23-33 are added. Claims 23-33 are now active in this application. No new matter has been added. Claims 5-8 are withdrawn as being directed to a non-elected invention.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 14 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In support of this position, the Examiner identifies phrases that lack clear antecedent basis and/or are unclear.

The rejection is moot as to cancelled claim 14.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 102 AND § 103

I. Claims 1-4 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP 2000-35519.

The rejection is moot as to cancelled claims 1-4.

II. Claims 9, 10, 12, 13, 20 and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP 09-46484.

The rejection is moot as to cancelled claims 9, 10, 12, 13, 20 and 21.

III. Claims 15 and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fujieda (USPN 5,926,286).

The rejection is moot as to cancelled claims 15 and 16.

IV. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over by JP 09-46484.

The rejection is moot as to cancelled claim 11.

V. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-46484 in view of JP 2000-35519.

The rejection is moot as to cancelled claim 14.

VI. Claims 17 an 18 rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujieda (USPN 5,926,286).

The rejection is moot as to cancelled claims 17 and 18.

VII. Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujieda (USPN 5,926,286) in view of JP 2000-35519.

The rejection is moot as to cancelled claim 19.

VIII. Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-46484 in view of JP 2000-35519.

The rejection is moot as to cancelled claim 22.

NEW CLAIMS

New claims 23-33 are submitted. Claims 23-27 provide an image reading apparatus, and claims 28-33 provide an image processor provided with the image reading apparatus. Claims 23 and 28 are independent claims. Claims 24-27 depend from claim 23, while the claims 29-33 depend from claim 28.

Independent claim 23 recites:

> An image reader comprising light source means for irradiating an original surface and light receiving means for receiving reflected light on the original, the light source means including:
> a belt-like light source; and
> a condensing lens attached to an irradiating surface of the light source, and ***the light source means forming trapezoid-shaped distribution of illuminance in a sub-scanning direction***. (Emphasis added)

Independent claim 28 recites:

> An image processor comprising an image reader having light source means for irradiating an original surface and light receiving means for receiving reflected light on the original, the light source means including:
> a belt-like light source; and
> a condensing lens attached to an irradiating surface of the light source, and ***the light source means forming trapezoid-shaped distribution of illuminance in a sub-scanning direction***. (Emphasis added)

JP 2000-35519 discloses an image reading apparatus provided with a light source. However, the reference does not disclose the illumination distribution of the light emitted from the light source, as it is clear from Figs 1-4. For instance, Fig. 4 illustrates the light source 31. And regarding the light source, the specification describes, in paragraph [0035], "... Moreover, it is possible to use the LED light source or the source of the white light as the light source 31. The

LED light source can be an array of many LED elements, and the white light source can be a cold cathode tube." But the illumination distribution is not described at all.

JP 09-46484 discloses an image processor provided with two image sensors: one uses a minification optical system, and another uses a contact type image sensor. JP 09-46484 also does not disclose the illumination distribution as shown in Figs. 1-18.

Fujieda discloses a method of making the illumination distribution uniform by means of a lens sheet 41. But it is the main scanning direction that the uniformity is ensured, and the illumination distribution in the sub scanning direction is not made to be uniform in Fujieda.

In Fujieda, column 1, lines 48-51; column 3, lines 27-32; and column 6, lines 28-29; it is described that the light is converged in a linear manner along the longitudinal direction of the cylindrical lens. Such description indicates that the converged light does not have any width in the sub scanning direction. Accordingly, it Fujieda does not teach or suggest the illumination distribution in a trapezoidal form along the sub scanning direction.

In addition, Fujieda obtains the uniform illumination distribution in the main scanning direction, as shown in Fig. 3 and Fig. 10, by means of the periodical structure in the main scanning direction, as shown in Fig. 2, Fig. 7 and Fig. 8. On the other hand, regarding the sub scanning direction, there is no description of such periodical structure, and also of a plurality of light emitting elements disposed in the sub scanning direction. Moreover, the illumination distribution in the main scanning direction shows the undulated change. Without adjustment of the shape or the refractive index of the lens, the illumination distribution cannot be formed in a trapezoidal form.

As mentioned above, neither JP 2000-35519, JP 09-46484 nor Fujieda discloses the limitation "the light source means forming trapezoid-shaped distribution of illuminance in a sub-scanning direction".

The inventions recited in claims 23-33 are configured so that the light source can form the trapezoidal illumination distribution in the sub scanning direction. Even if the center of the irradiated light is off the reading position to the sub scanning direction when the original shifts in the up and down direction, it is possible to obtain the sufficient illuminance at the reading point, as shown in Fig. 10 and described in the specification. Therefore, even in case the original is like a book, there is no shortage of light amount. And even though the illumination distribution in the main scanning direction is uniform, it is difficult to obtain the same effect.

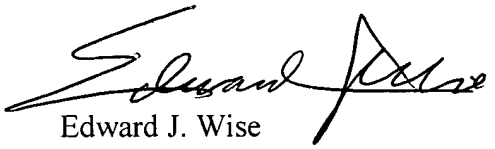
CONCLUSION

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY



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